FIG. 1

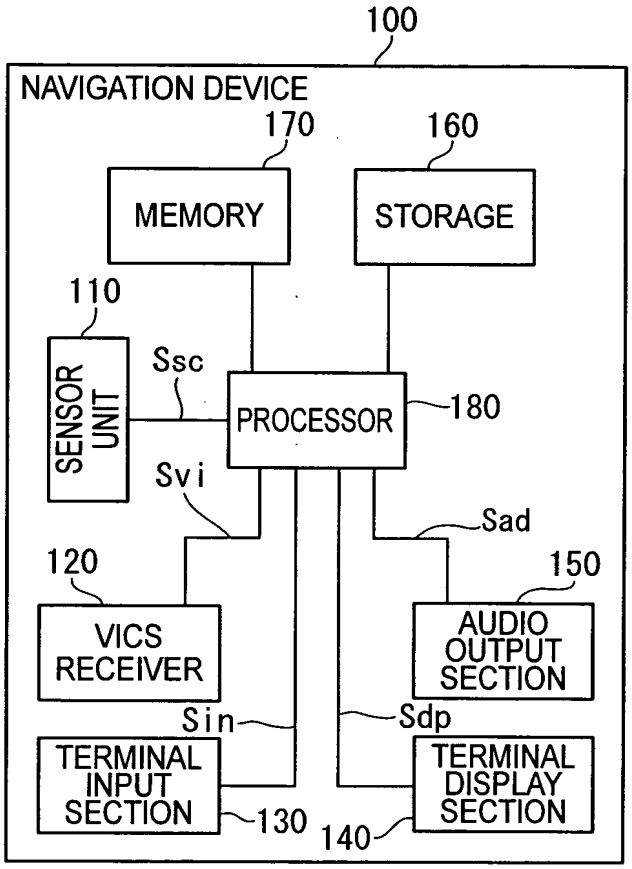

100
NAVIGATION DEVICE
170
160
MEMORY
STORAGE
110
SENSOR UNIT
Ssc
PROCESSOR
180
Svi
Sad
120
150
VICS RECEIVER
AUDIO OUTPUT SECTION
Sin
Sdp
TERMINAL INPUT SECTION
130
TERMINAL DISPLAY SECTION
140

FIG. 2

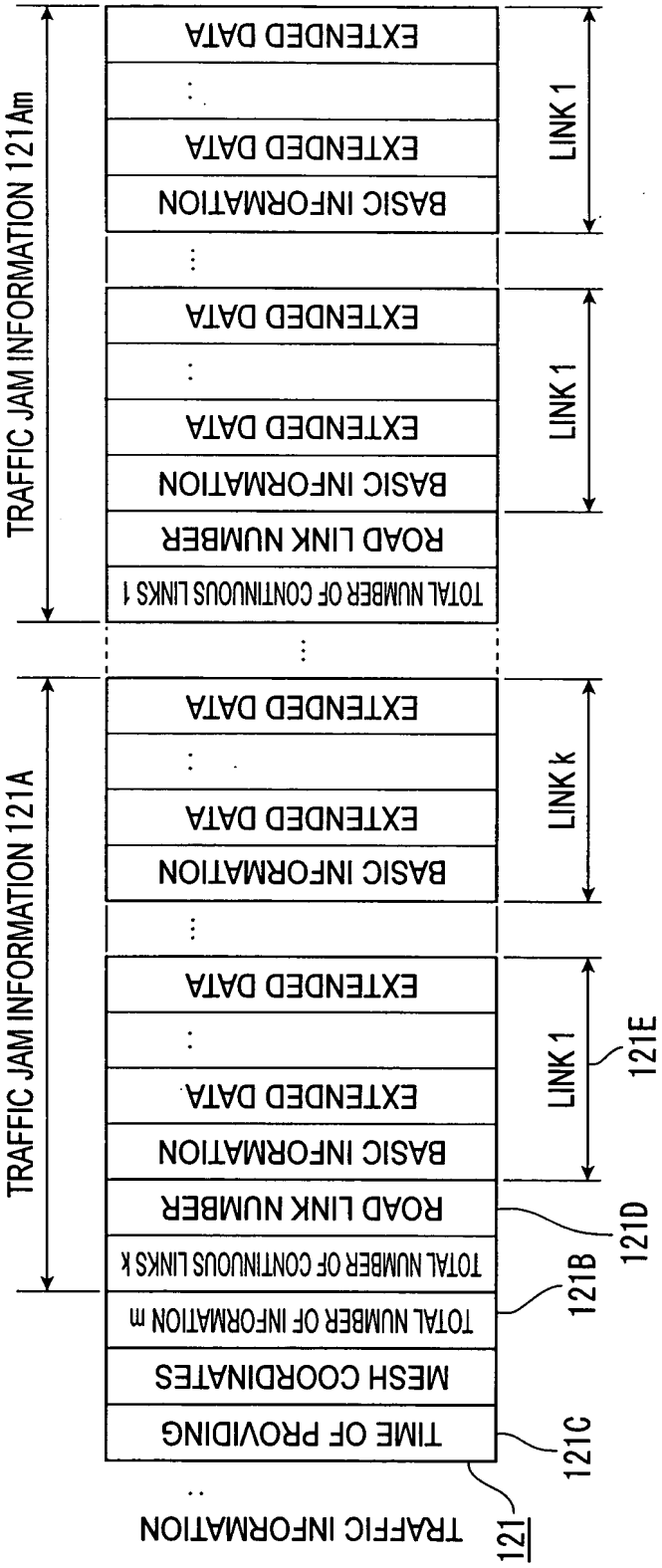

TRAFFIC INFORMATION
121
TIME OF PROVIDING
121C
MESH COORDINATES
TOTAL NUMBER OF INFORMATION m
121B
TOTAL NUMBER OF CONTINUOUS LINKS k
ROAD LINK NUMBER
121D
BASIC INFORMATION
EXTENDED DATA
LINK 1
121E
TRAFFIC JAM INFORMATION 121A
BASIC INFORMATION
EXTENDED DATA
LINK k
TRAFFIC JAM INFORMATION 121Am
TOTAL NUMBER OF CONTINUOUS LINKS 1
ROAD LINK NUMBER
BASIC INFORMATION
EXTENDED DATA
LINK 1

FIG. 3

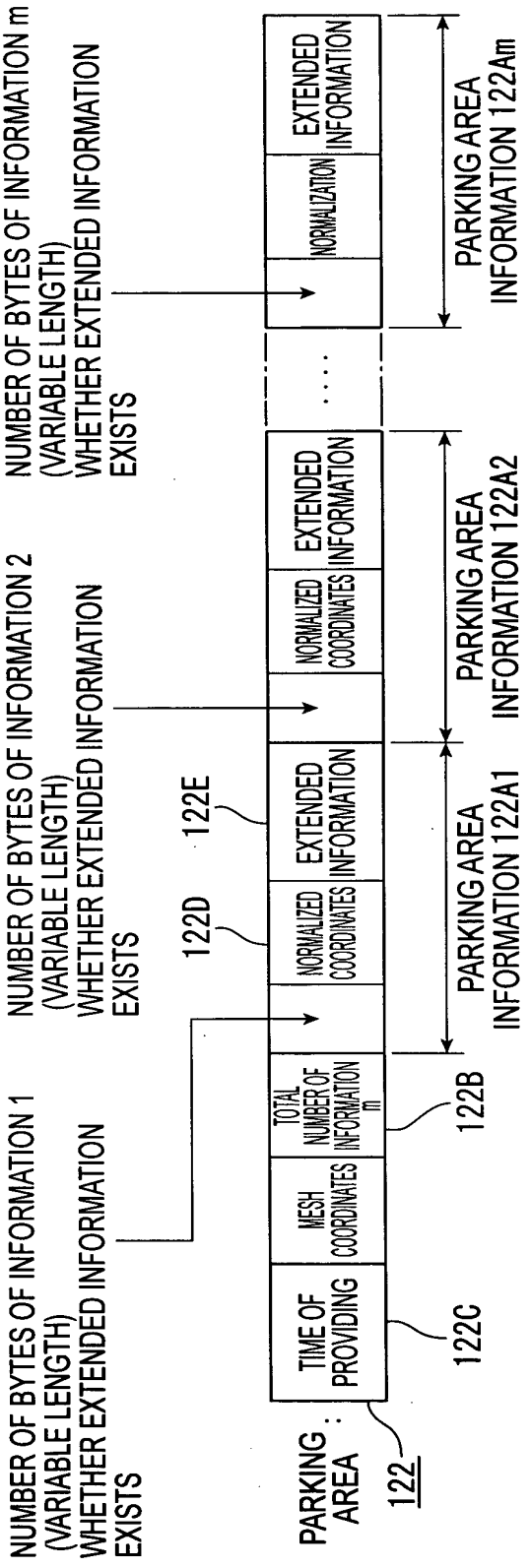

PARKING AREA 122
TIME OF PROVIDING
MESH COORDINATES
TOTAL NUMBER OF INFORMATION m
NORMALIZED COORDINATES
EXTENDED INFORMATION
NORMALIZATION
122C
122B
122D
122E
NUMBER OF BYTES OF INFORMATION 1 (VARIABLE LENGTH) WHETHER EXTENDED INFORMATION EXISTS
NUMBER OF BYTES OF INFORMATION 2 (VARIABLE LENGTH) WHETHER EXTENDED INFORMATION EXISTS
NUMBER OF BYTES OF INFORMATION m (VARIABLE LENGTH) WHETHER EXTENDED INFORMATION EXISTS
PARKING AREA INFORMATION 122A1
PARKING AREA INFORMATION 122A2
PARKING AREA INFORMATION 122Am

FIG. 4

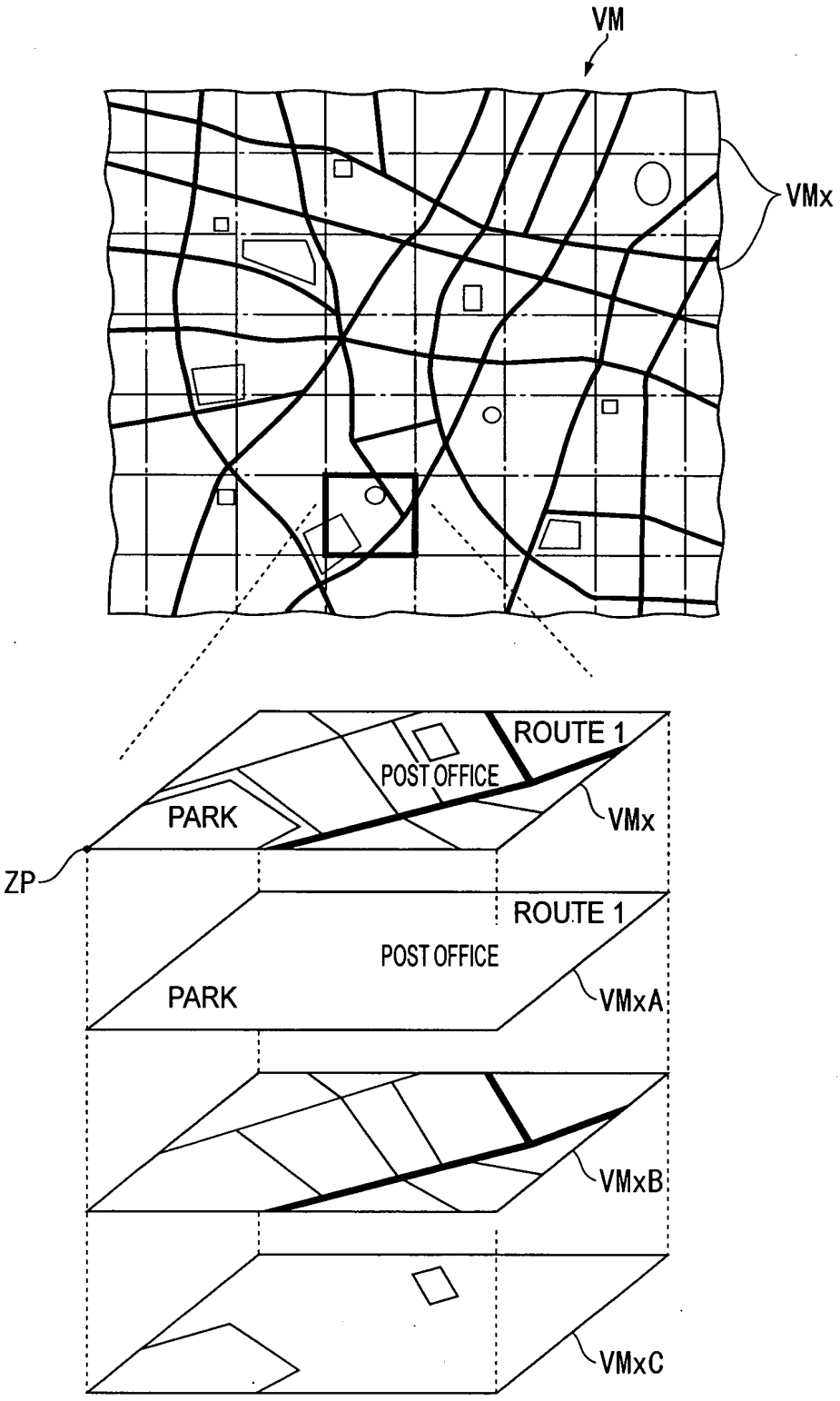

VM
VMx
ROUTE 1
POST OFFICE
PARK
VMx
ZP
ROUTE 1
POST OFFICE
PARK
VMxA
VMxB
VMxC

FIG. 5

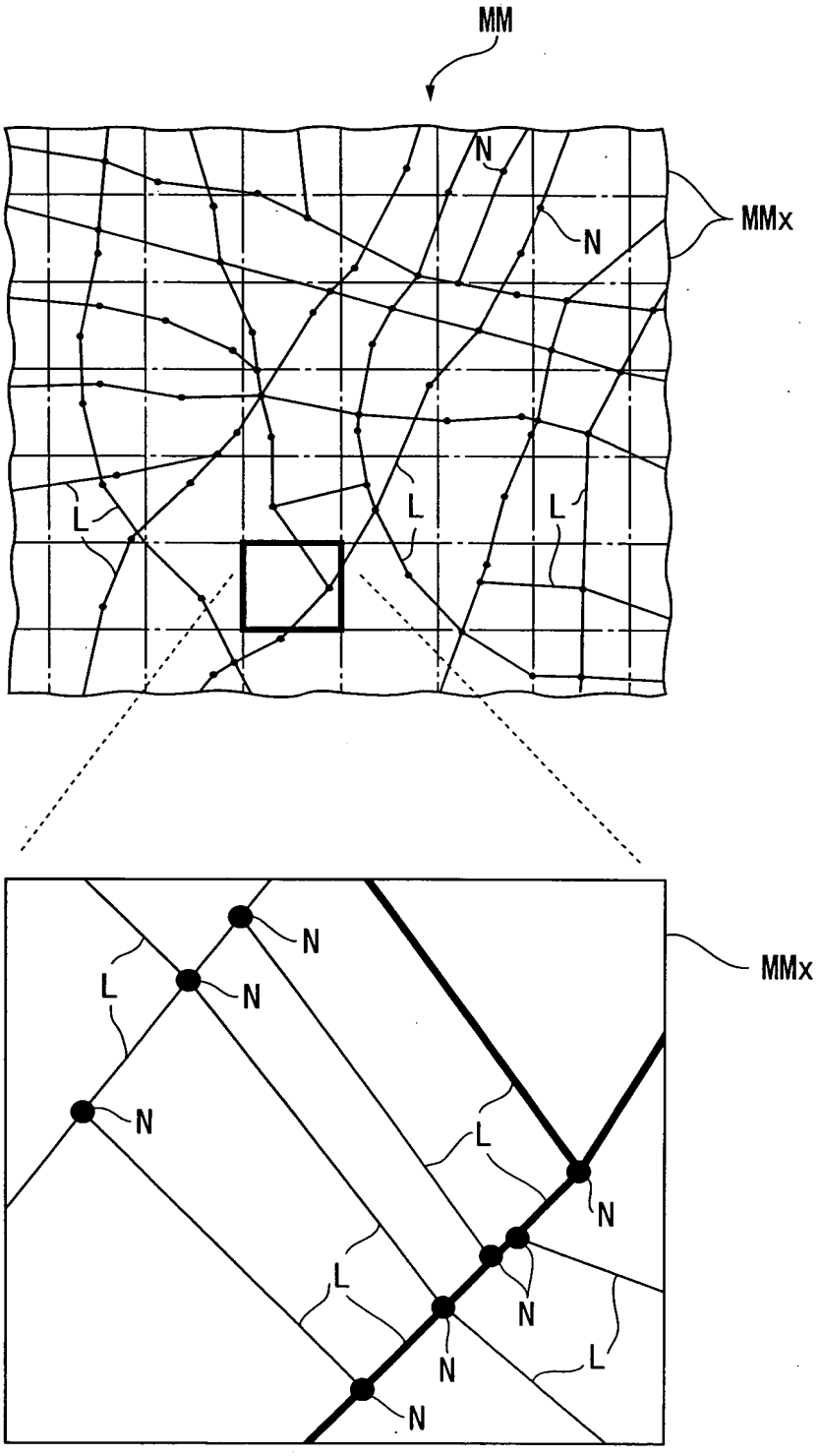


FIG. 6

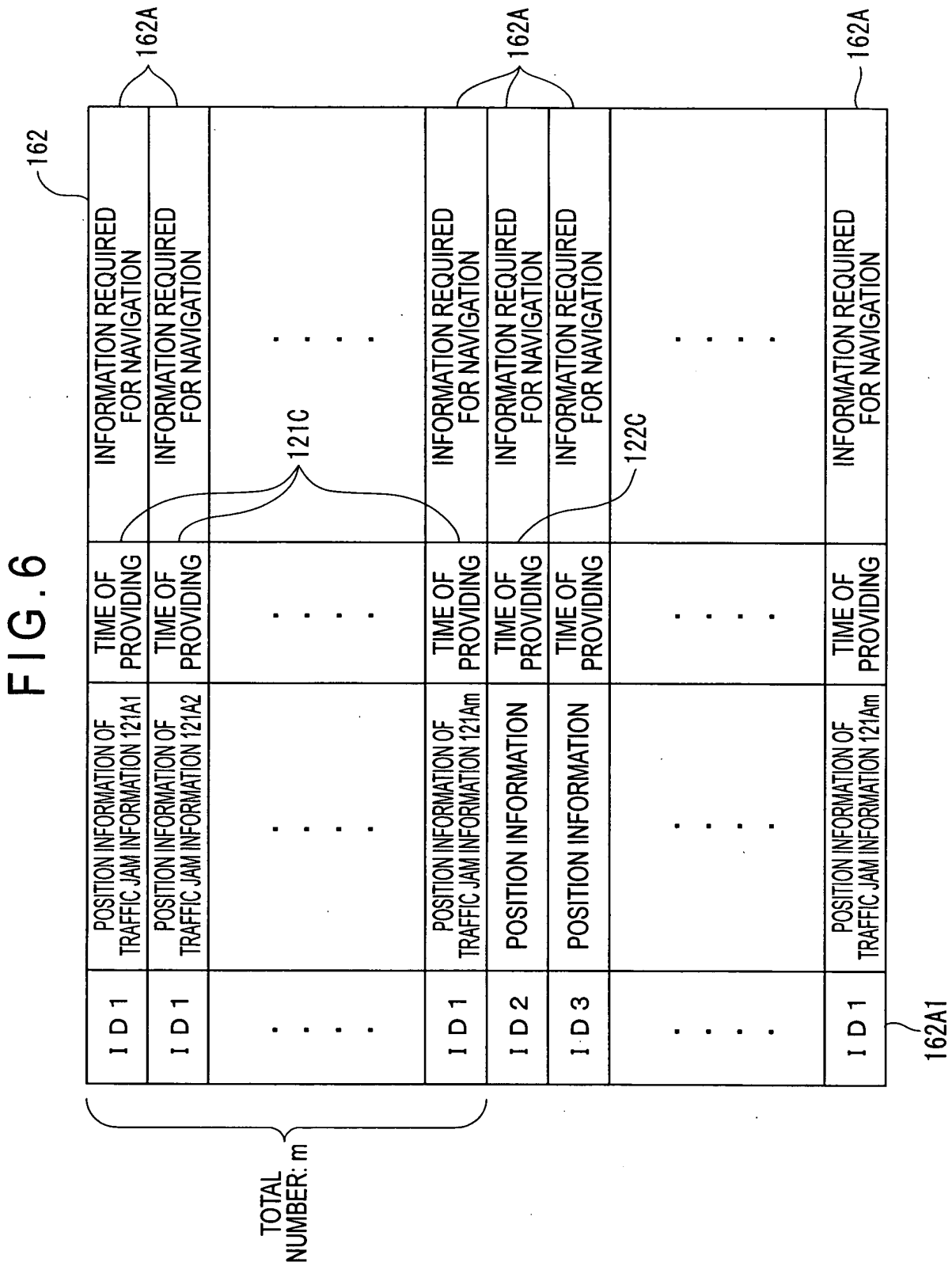

162
162A
162A
162A
162A1
121C
122C
TOTAL NUMBER: m
ID 1
POSITION INFORMATION OF TRAFFIC JAM INFORMATION 121A1
TIME OF PROVIDING
INFORMATION REQUIRED FOR NAVIGATION
ID 1
POSITION INFORMATION OF TRAFFIC JAM INFORMATION 121A2
TIME OF PROVIDING
INFORMATION REQUIRED FOR NAVIGATION
ID 1
POSITION INFORMATION OF TRAFFIC JAM INFORMATION 121Am
TIME OF PROVIDING
INFORMATION REQUIRED FOR NAVIGATION
ID 2
POSITION INFORMATION
TIME OF PROVIDING
INFORMATION REQUIRED FOR NAVIGATION
ID 3
POSITION INFORMATION
TIME OF PROVIDING
INFORMATION REQUIRED FOR NAVIGATION
ID 1
POSITION INFORMATION OF TRAFFIC JAM INFORMATION 121Am
TIME OF PROVIDING
INFORMATION REQUIRED FOR NAVIGATION

FIG. 7

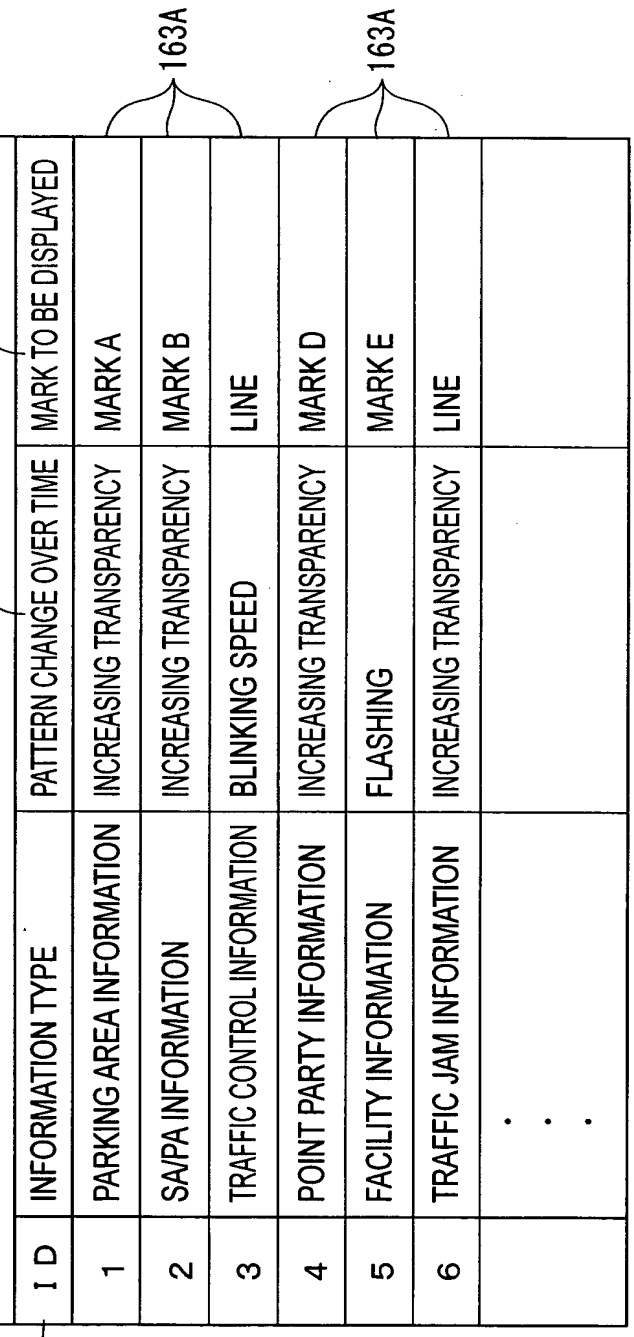

163
163A1
163A2
163A
163A
<ID CONVERSION TABLE>
I D
INFORMATION TYPE
PATTERN CHANGE OVER TIME
MARK TO BE DISPLAYED
1
PARKING AREA INFORMATION
INCREASING TRANSPARENCY
MARK A
2
SA/PA INFORMATION
INCREASING TRANSPARENCY
MARK B
3
TRAFFIC CONTROL INFORMATION
BLINKING SPEED
LINE
4
POINT PARTY INFORMATION
INCREASING TRANSPARENCY
MARK D
5
FACILITY INFORMATION
FLASHING
MARK E
6
TRAFFIC JAM INFORMATION
INCREASING TRANSPARENCY
LINE
162A1

FIG. 8

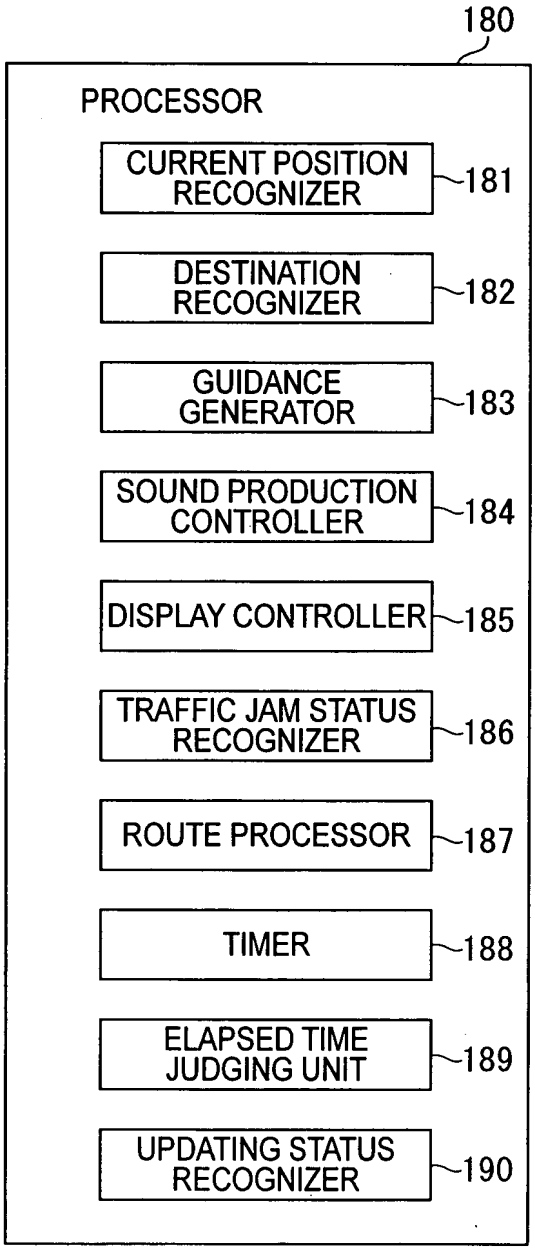

180
PROCESSOR
CURRENT POSITION RECOGNIZER
181
DESTINATION RECOGNIZER
182
GUIDANCE GENERATOR
183
SOUND PRODUCTION CONTROLLER
184
DISPLAY CONTROLLER
185
TRAFFIC JAM STATUS RECOGNIZER
186
ROUTE PROCESSOR
187
TIMER
188
ELAPSED TIME JUDGING UNIT
189
UPDATING STATUS RECOGNIZER
190

FIG.9

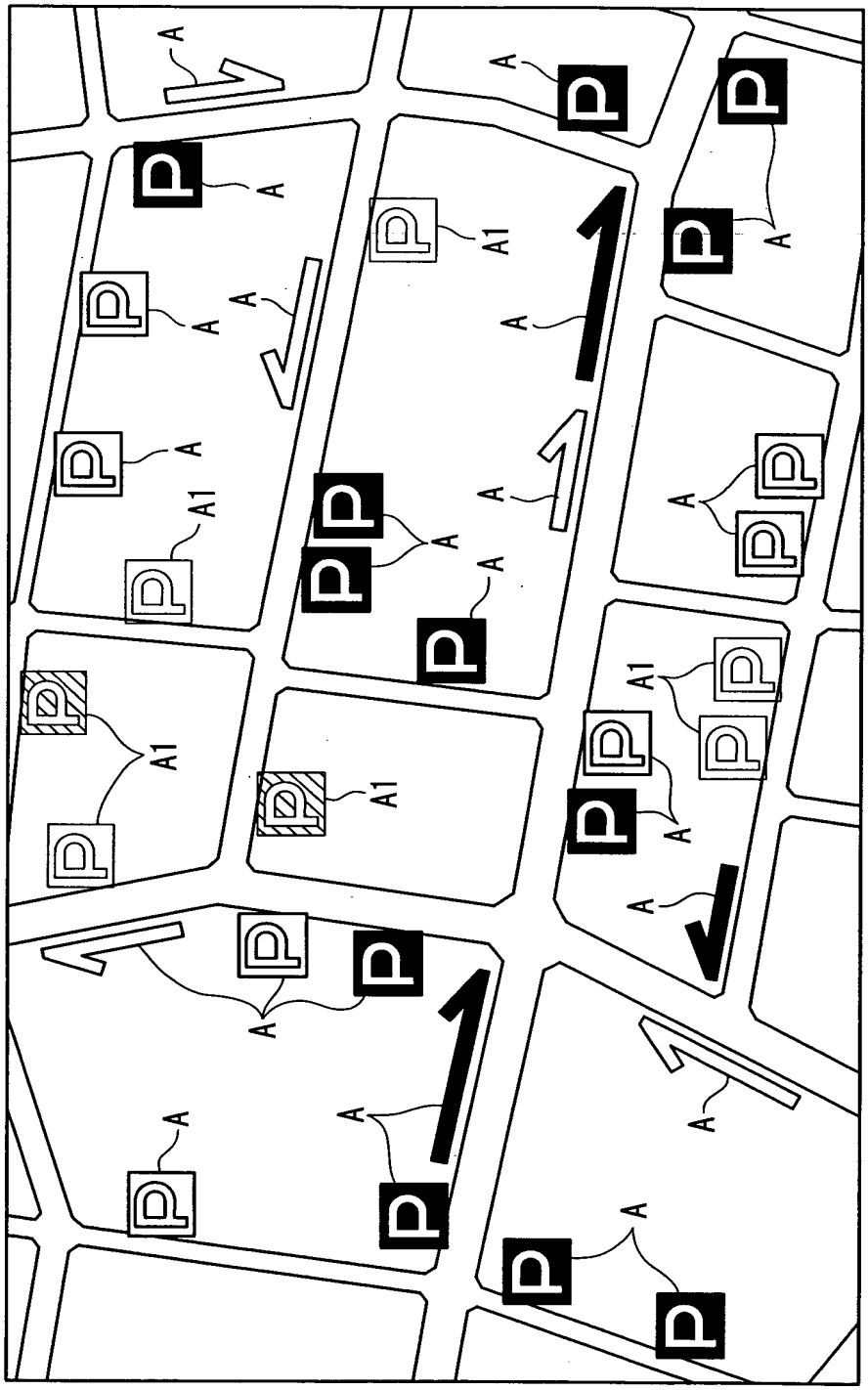


FIG.10

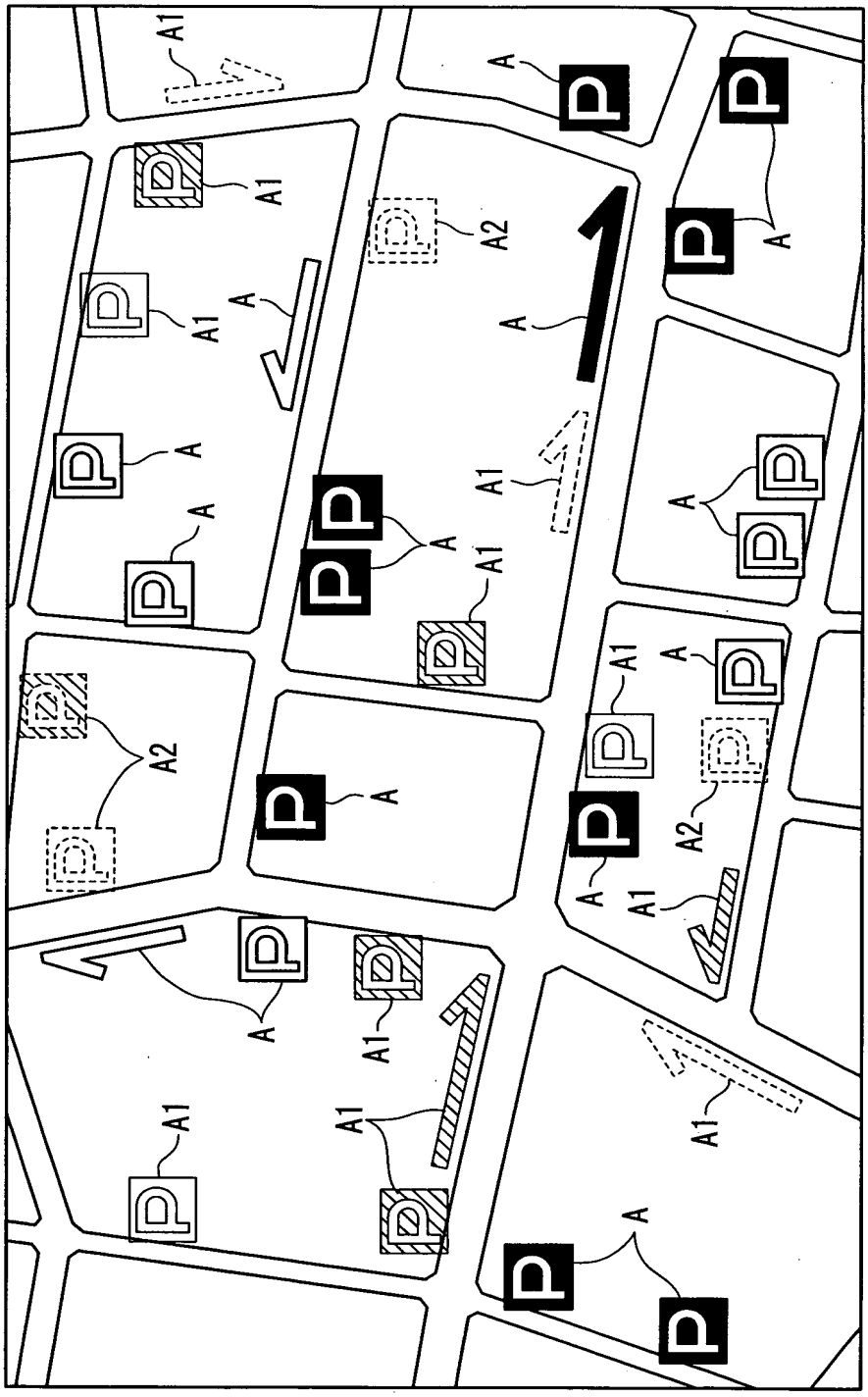


FIG. 11

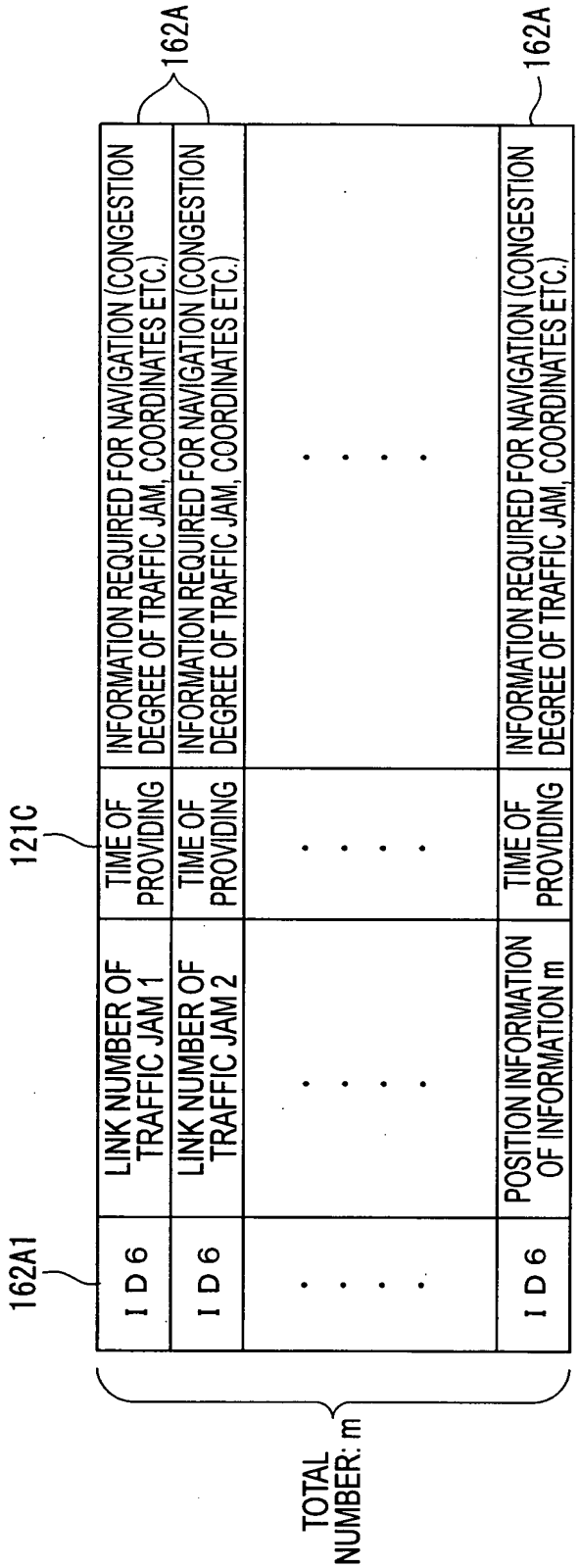

162A1
121C
162A
162A
ID 6
LINK NUMBER OF TRAFFIC JAM 1
TIME OF PROVIDING
INFORMATION REQUIRED FOR NAVIGATION (CONGESTION DEGREE OF TRAFFIC JAM, COORDINATES ETC.)
ID 6
LINK NUMBER OF TRAFFIC JAM 2
TIME OF PROVIDING
INFORMATION REQUIRED FOR NAVIGATION (CONGESTION DEGREE OF TRAFFIC JAM, COORDINATES ETC.)
ID 6
POSITION INFORMATION OF INFORMATION m
TIME OF PROVIDING
INFORMATION REQUIRED FOR NAVIGATION (CONGESTION DEGREE OF TRAFFIC JAM, COORDINATES ETC.)
TOTAL NUMBER: m

FIG. 12

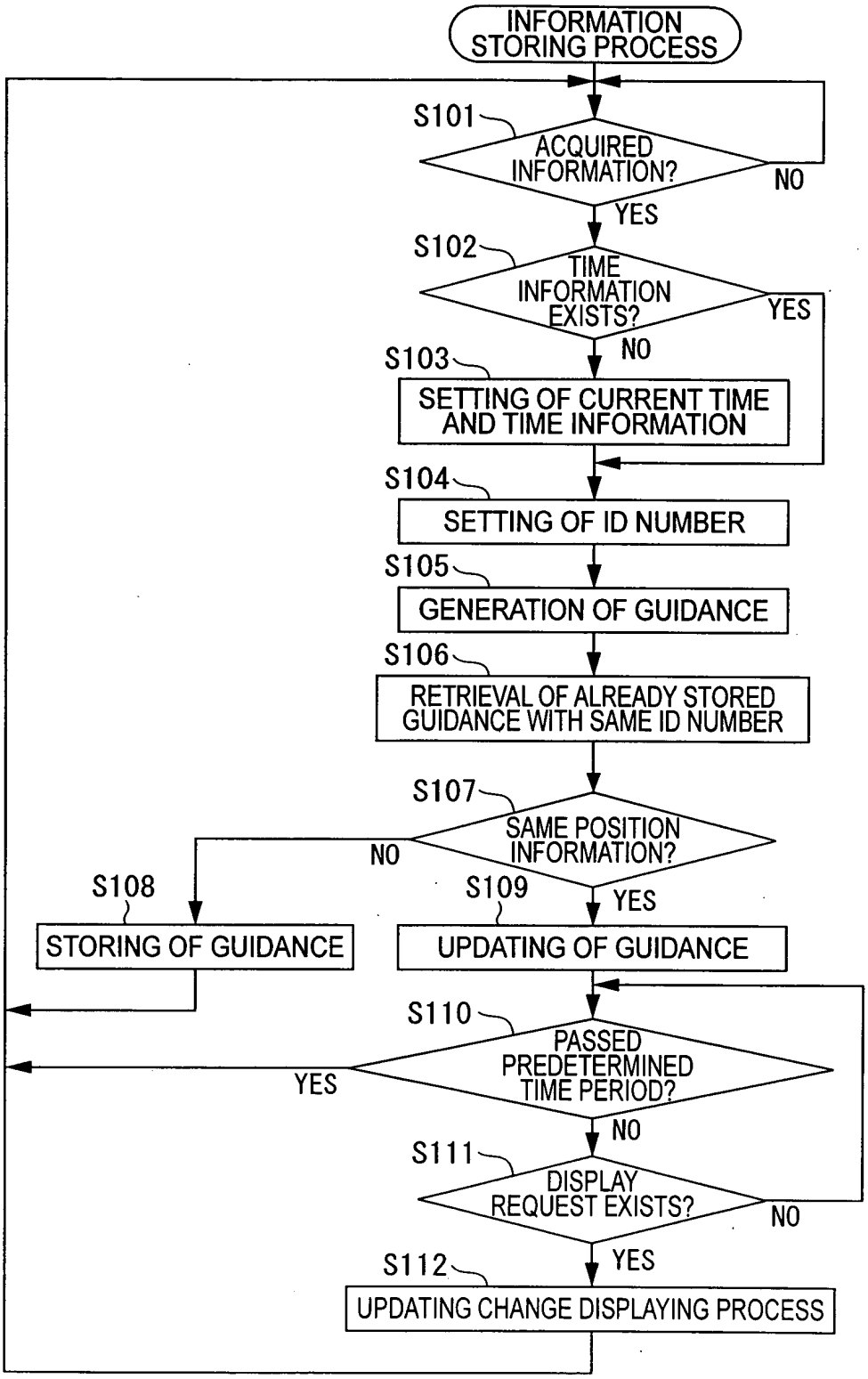

INFORMATION STORING PROCESS
S101
ACQUIRED INFORMATION?
NO
YES
S102
TIME INFORMATION EXISTS?
YES
NO
S103
SETTING OF CURRENT TIME AND TIME INFORMATION
S104
SETTING OF ID NUMBER
S105
GENERATION OF GUIDANCE
S106
RETRIEVAL OF ALREADY STORED GUIDANCE WITH SAME ID NUMBER
S107
SAME POSITION INFORMATION?
NO
YES
S108
STORING OF GUIDANCE
S109
UPDATING OF GUIDANCE
S110
PASSED PREDETERMINED TIME PERIOD?
YES
NO
S111
DISPLAY REQUEST EXISTS?
NO
YES
S112
UPDATING CHANGE DISPLAYING PROCESS

FIG. 13

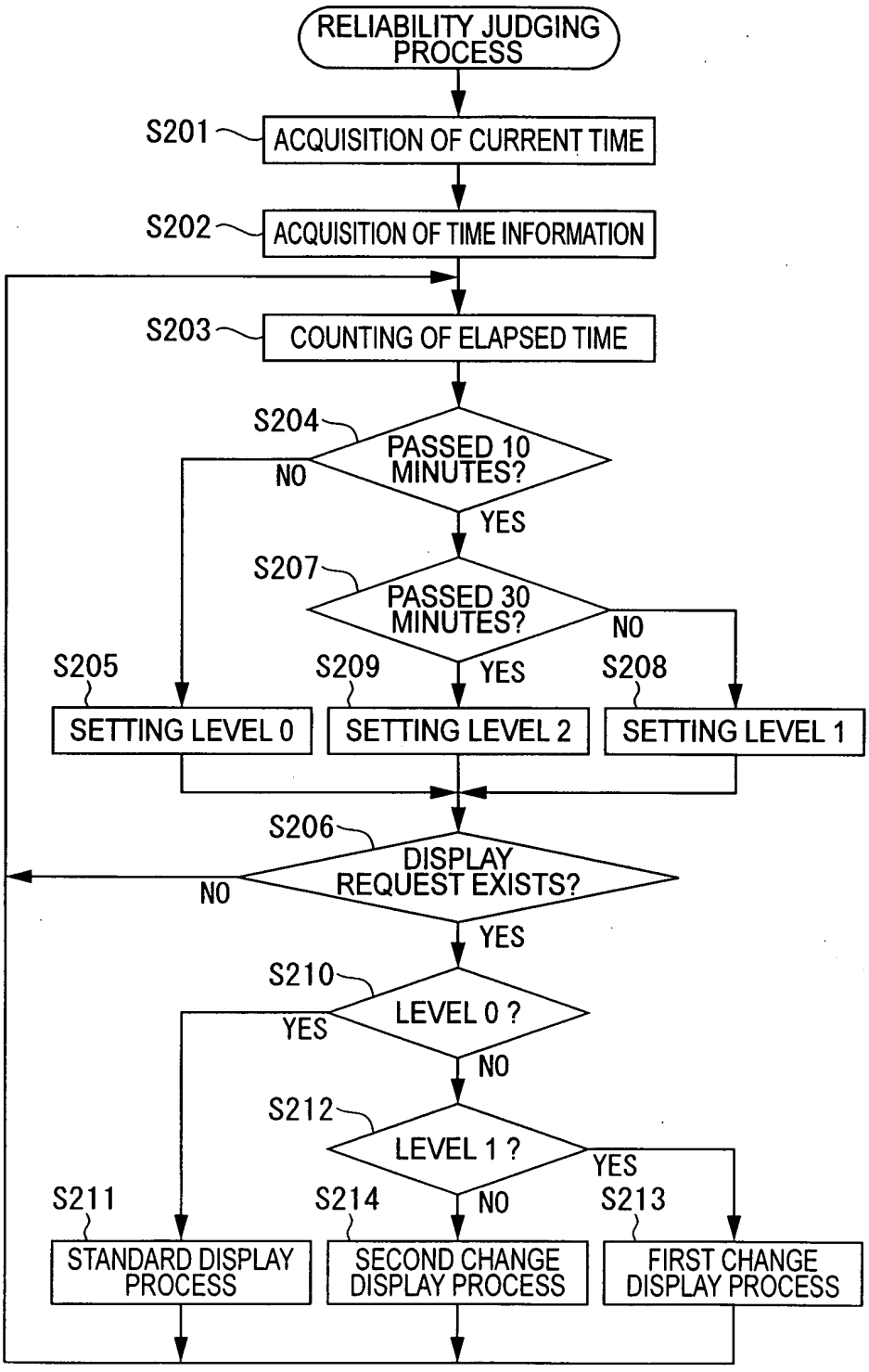
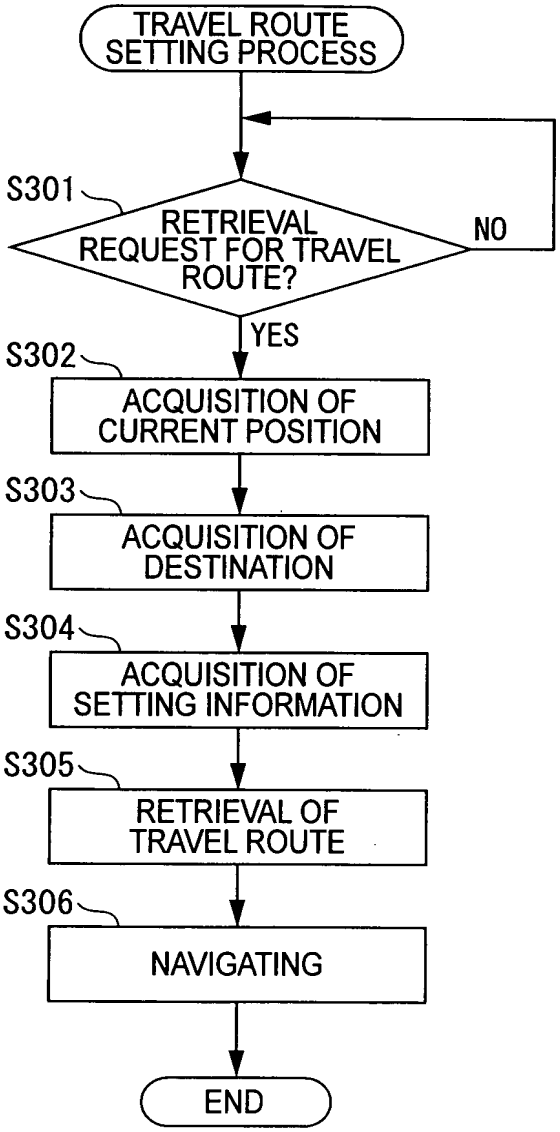

RELIABILITY JUDGING PROCESS
S201
ACQUISITION OF CURRENT TIME
S202
ACQUISITION OF TIME INFORMATION
S203
COUNTING OF ELAPSED TIME
S204
PASSED 10 MINUTES?
NO
YES
S207
PASSED 30 MINUTES?
NO
YES
S205
S209
S208
SETTING LEVEL 0
SETTING LEVEL 2
SETTING LEVEL 1
S206
DISPLAY REQUEST EXISTS?
NO
YES
S210
LEVEL 0 ?
YES
NO
S212
LEVEL 1 ?
YES
NO
S211
S214
S213
STANDARD DISPLAY PROCESS
SECOND CHANGE DISPLAY PROCESS
FIRST CHANGE DISPLAY PROCESS

FIG. 14


TRAVEL ROUTE SETTING PROCESS
S301
RETRIEVAL REQUEST FOR TRAVEL ROUTE?
NO
YES
S302
ACQUISITION OF CURRENT POSITION
S303
ACQUISITION OF DESTINATION
S304
ACQUISITION OF SETTING INFORMATION
S305
RETRIEVAL OF TRAVEL ROUTE
S306
NAVIGATING
END